

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

1 - 31. (canceled)

32. (currently amended) A light emitting device having a light emitting layer portion and a current spreading layer, respectively composed of a Group III-V compound semiconductor, formed on a single substrate, wherein:

the light emitting layer portion is formed by a metal organic vapor-phase epitaxy process; and

the current spreading layer, on the light emitting layer portion, is composed of GaP formed as an n-type semiconductor layer by a hydride vapor-phase epitaxy process which is different from the metal organic vapor-phase epitaxy process;

herein the current spreading layer and a portion of the light emitting layer portion in contact with the current spreading layer are composed of Group III-V compound semiconductors differing from each other in the lattice constants, and the current spreading layer has an MO layer portion formed by a metal organic vapor-phase epitaxy process in a portion in contact with the light

emitting layer portion, and has an HVPE layer portion formed by a hydride vapor-phase epitaxy process in a residual portion; and

wherein a high-concentration doped layer is formed in a surficial area including the main surface on the electrode forming side of the current spreading layer, so as to have a carrier concentration of one or more selected from the group consisting of Si, S, Se and Te as the dopant higher than that in the residual portion of the current spreading layer.

33. (cancel)

34. (original) The light emitting device as claimed in Claim 32, wherein the current spreading layer is formed, using one or more selected from the group consisting of Si, S, Se and Te as the dopant, as an n-type semiconductor layer, and the carrier concentration of the dopant is adjusted within a range from  $1 \times 10^{18}/\text{cm}^3$  to  $5 \times 10^{19}/\text{cm}^3$  for the high-concentration doped layer, and from  $1 \times 10^{17}/\text{cm}^3$  to  $1 \times 10^{18}/\text{cm}^3$  for the residual portion.

35. (cancel)

36. (currently amended) ~~[[The]]~~ A light emitting device as claimed in claim 32, having a light emitting layer portion and a current spreading layer, respectively composed of a Group III-V

compound semiconductor, once formed on a single crystal substrate by epitaxial growth, wherein:

the light emitting layer portion is formed by a metal organic vapor-phase epitaxy process; and

the current spreading layer, on the light emitting layer portion, is formed as an n-type semiconductor layer by a hydride vapor-phase epitaxy process which is different from the metal organic vapor-phase epitaxy process;

herein the current spreading layer and a portion of the light emitting layer portion in contact with the current spreading layer are composed of Group III-V compound semiconductors differing from each other in the lattice constants, and the current spreading layer has an MO layer portion formed by a metal organic vapor-phase epitaxy process in a portion in contact with the light emitting layer portion, and has an HVPE layer portion formed by a hydride vapor-phase epitaxy process in a residual portion;

wherein a high-concentration doped layer is formed in a surficial area including the main surface on the electrode forming side of the current spreading layer, so as to have a carrier concentration of one or more selected from the group consisting of Si, S, Se and Te as the dopant higher than that in the residual portion of the current spreading layer; and

wherein the current spreading layer is designed to have a portion on the electrode forming side a high-GaAs-alloy-composition  $\text{GaAs}_{1-a}\text{P}_a$  ~~( $0 < a < 1$ )~~ ( $0 \leq a < 1$ ) layer having a GaAs alloy

composition 1-a larger than that in the residual portion, and to have a high-concentration doped layer, containing one or more selected from the group consisting of Si, S, Se and Te as the dopant, formed in the high-GaAs-alloy-composition  $\text{GaAs}_{1-a}\text{P}_a$  layer.

37. (cancel)

38. (currently amended) ~~[[The]]~~ A light emitting device as claimed in claim 34, having a light emitting layer portion and a current spreading layer, respectively composed of a Group III-V compound semiconductor, once formed on a single crystal substrate by epitaxial growth, wherein:

the light emitting layer portion is formed by a metal organic vapor-phase epitaxy process; and

the current spreading layer, on the light emitting layer portion, is formed as an n-type semiconductor layer by a hydride vapor-phase epitaxy process which is different from the metal organic vapor-phase epitaxy process;

herein the current spreading layer and a portion of the light emitting layer portion in contact with the current spreading layer are composed of Group III-V compound semiconductors differing from each other in the lattice constants, and the current spreading layer has an MO layer portion formed by a metal organic vapor-phase epitaxy process in a portion in contact with the light

emitting layer portion, and has an HVPE layer portion formed by a hydride vapor-phase epitaxy process in a residual portion;

wherein the current spreading layer is formed, using one or more selected from the group consisting of Si, S, Se and Te as the dopant, as an n-type semiconductor layer, and the carrier concentration of the dopant is adjusted within a range from  $1 \times 10^{18}/\text{cm}^3$  to  $5 \times 10^{19}/\text{cm}^3$  for the high-concentration doped layer, and from  $1 \times 10^{17}/\text{cm}^3$  to  $1 \times 10^{18}/\text{cm}^3$  for the residual portion; and

wherein a high-concentration doped layer is formed in a surficial area including the main surface on the electrode forming side of the current spreading layer, so as to have a carrier concentration of one or more selected from the group consisting of Si, S, Se and Te as the dopant higher than that in the residual portion of the current spreading layer,

wherein the current spreading layer is designed to have a portion on the electrode forming side a high-GaAs-alloy-composition  $\text{GaAs}_{1-a}\text{P}_a$  ~~( $0 < a < 1$ )~~ ( $0 \leq a < 1$ ) layer having a GaAs alloy composition  $1-a$  larger than that in the residual portion, and to have a high-concentration doped layer, containing one or more selected from the group consisting of Si, S, Se and Te as the dopant, formed in the high-GaAs-alloy-composition  $\text{GaAs}_{1-a}\text{P}_a$  layer.

39. (cancel)